

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Currently amended) Method to regulate a circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in a passenger compartment of a vehicle, in particular a motor vehicle, with a sensor for detecting hazardous gas concentrations in the passenger compartment and for supplying a triggering signal ( $I_{CO_2}$ ) ~~of~~ to a control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in a passenger compartment, ~~characterized in that~~ wherein the sensor is a temperature-compensated sensor, whereby, in addition to the hazardous gas concentration measured by the sensor, the temperature ( $I_t$ ) measured by the sensor, which is used for temperature compensation of the sensor for detecting the hazardous gas concentration, is used to regulate the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in the passenger compartment, wherein the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) induces the supply of the passenger compartment in an alternating manner with either exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (CL), wherein the sensor for detecting hazardous gas concentrations detects the carbon dioxide concentration in the passenger compartment according to the principle of photometric gas measurement at wavelengths of 4.2  $\mu m$  and 4.3  $\mu m$  and at a reference wavelength of between 3.8  $\mu m$  and 4.0  $\mu m$ , wherein the hazardous gas concentration threshold value (CL) in the passenger compartment is selected at approximately 0.2% by volume  $CO_2$ .
2. (Canceled)
3. (Original) Method according to Claim 1, characterized in that the control unit for the circulating air and/or intake air portion controls the size of the circulating air portion ( $V_s$ ) in the passenger compartment of the vehicle.

4. (Original) Method according to Claim 3, characterized in that the size of the circulating air portion ( $V_s$ ) in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment.
5. (Previously presented) Method according to Claim 1, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) increases the circulating air portion ( $V_s$ ) in the passenger compartment when there is an increase in the outside temperature of the passenger compartment.
6. (Previously presented) Method according to Claim 1, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) is a part of a cooling/heating device.
7. (Canceled)
8. (Canceled)
9. (Previously presented) Method according to Claim 1, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) adjusts the circulating air portion ( $V_s$ ) in the passenger compartment to approx. 80% when a person is located in the passenger compartment.
10. (Canceled)

11. (Currently amended) Sensor for regulating a circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in a passenger compartment of a motor vehicle, the sensor detecting hazardous gas concentrations in the passenger compartment and supplying a triggering signal ( $I_{CO_2}$ ) ~~of~~ to a control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in the passenger compartment, ~~characterized in that~~ wherein the sensor is a temperature-compensated sensor, whereby, in addition to the hazardous gas concentration measured by the sensor, the temperature ( $I_t$ ) measured by the sensor, which is used for temperature compensation of the sensor for detecting the hazardous gas concentration, is used to regulate the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) in the passenger compartment, characterized in that the  $CO_2$  concentration in the passenger compartment is measured by the sensor via a wavelength-specific weakening of electromagnetic radiation in the infrared range, wherein the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) induces the supply of the passenger compartment in an alternating manner with either exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (CL), wherein the sensor for detecting hazardous gas concentrations detects the  $CO_2$  concentration in the passenger compartment according to the principle of photometric gas measurement at wavelengths of 4.2  $\mu m$  and 4.3  $\mu m$  and at a reference wavelength of between 3.8  $\mu m$  and 4.0  $\mu m$ , wherein the hazardous gas concentration threshold value (CL) in the passenger compartment is selected at approximately 0.2% by volume  $CO_2$ .
12. (Canceled)
13. (Previously presented) Sensor according to Claim 11, characterized in that the sensor for detecting hazardous gas concentrations in the passenger compartment and the sensor for temperature compensation form a structural unit.
14. (Canceled)
15. (Previously presented) Sensor according to Claim 11, characterized in that the control unit for the circulating air and/or intake air portion controls the size of the circulating air portion ( $V_s$ ) in the passenger compartment of the vehicle.

16. (Previously presented) Sensor according to Claim 15, characterized in that the size of the circulating air portion ( $V_s$ ) in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment.

17. (Previously presented) Sensor according to Claim 11, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) increases the circulating air portion ( $V_s$ ) in the passenger compartment when there is an increase in the outside temperature of the passenger compartment.

18. (Previously presented) Sensor according to Claim 11, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) is a part of a cooling/heating device.

19. (Canceled)

20. (Previously presented) Sensor according to Claim 11, characterized in that the control unit for the circulating air and/or intake air portion ( $V_s$ ,  $V_o$ ) adjusts the circulating air portion ( $V_s$ ) in the passenger compartment to approx. 80% when a person is located in the passenger compartment.